Jupyter

File System Redesign

Wireframes

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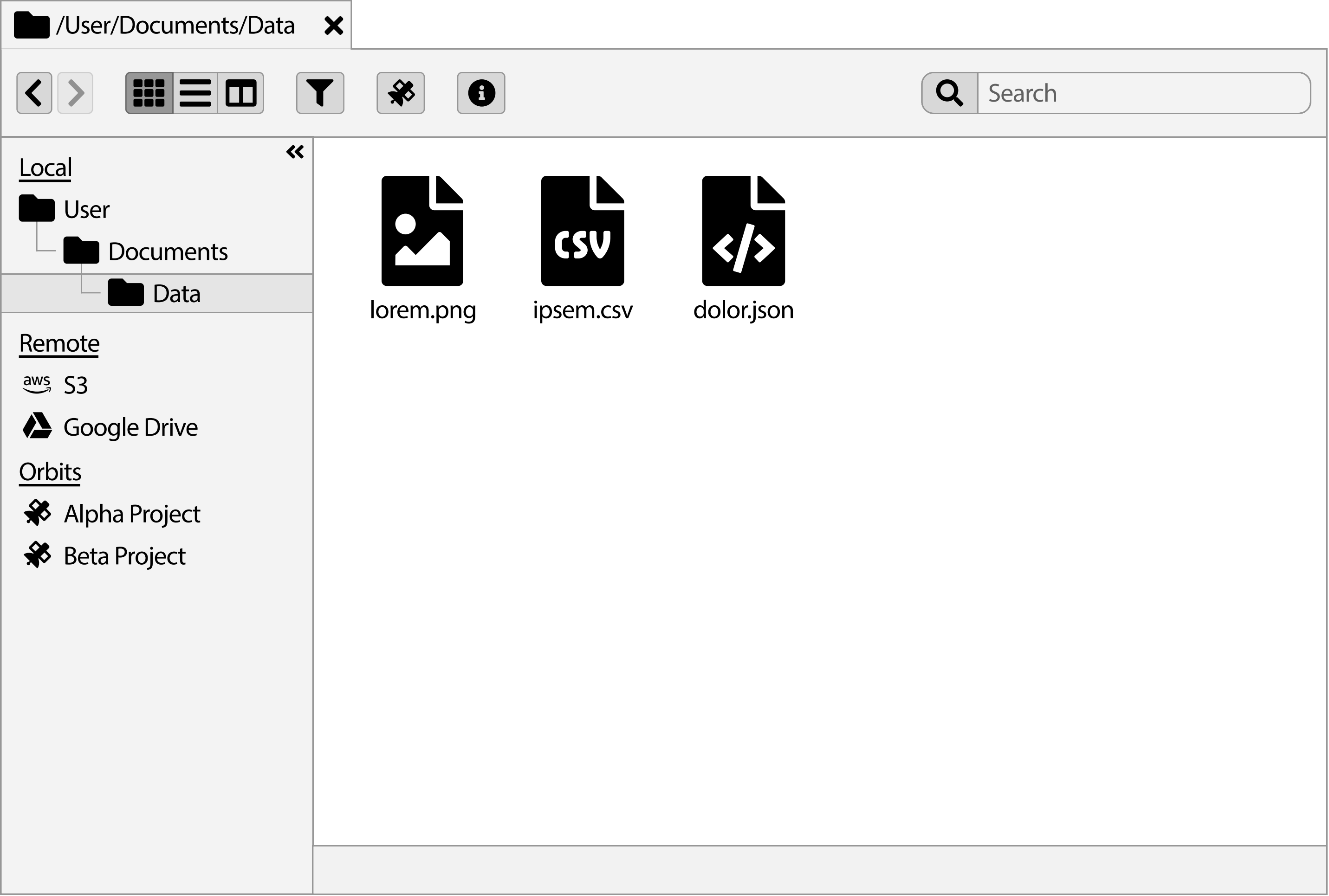
"Mac Finder Lite"
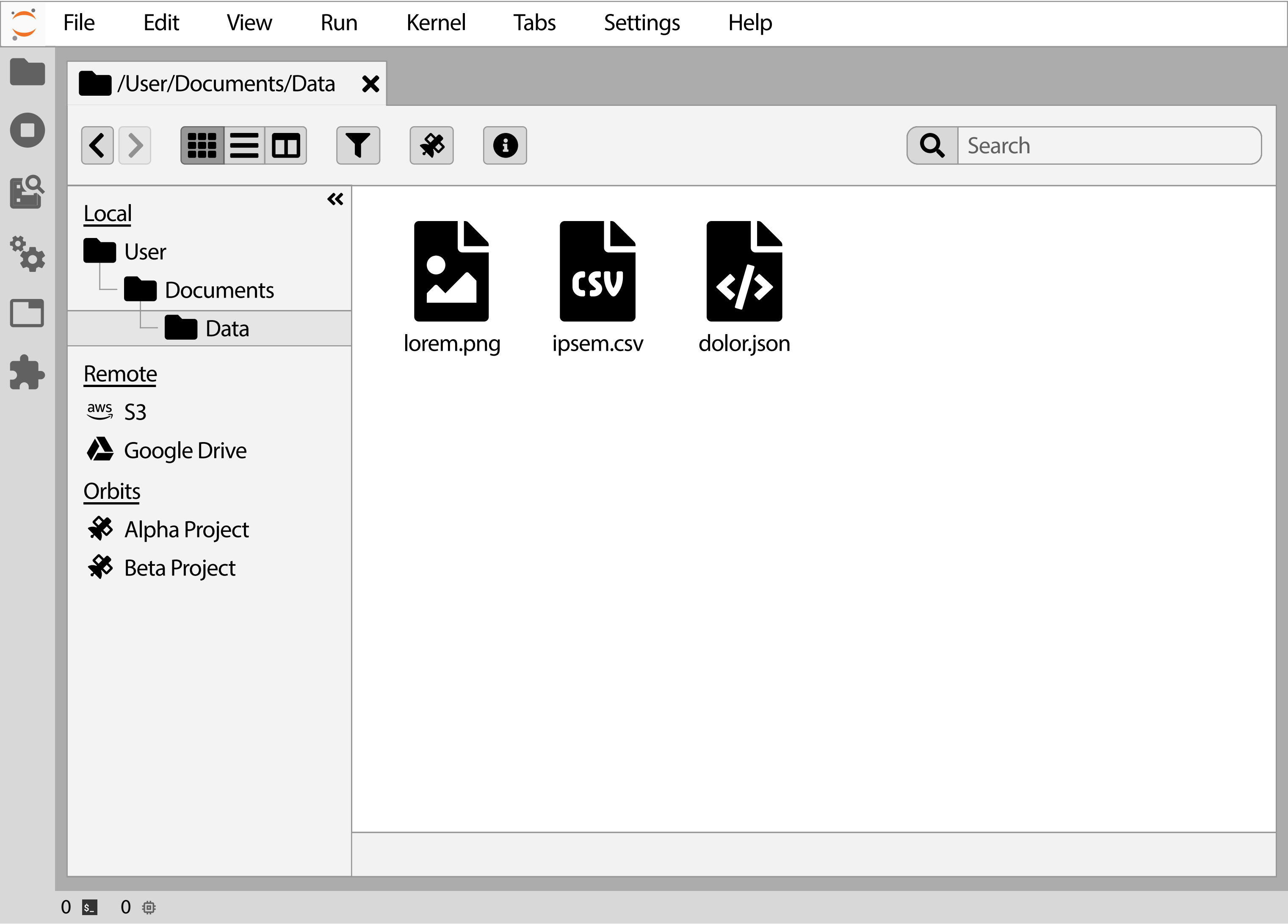
Novice - Intermediate

📁 /User/Documents/Data ✕

Local
📁 User
📁 Documents
📁 Data

Remote
aws S3
Google Drive

Orbits
Alpha Project
Beta Project

Search

lorem.png   ipsem.csv   dolor.json

Click file browser
button to open a new
file browser tab.

File   Edit   View   Run   Kernel   Tabs   Settings   Help

📁 /User/Documents/Data   ✕

Search

Local

📁 User

  📁 Documents

    📁 Data

Remote

aws S3

△ Google Drive

Orbits

✦ Alpha Project

✦ Beta Project

lorem.png   ipsem.csv   dolor.json

0 s_ 0 ⚙

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Open multiple tabs of the file browser from the Launcher.

| 📁 /User/Documents/Data ✖ | 📁 S3/Directory/Stuff ✖ |

Grid View,
List View,
Column View

Full path visible in the sidebar. (Horizontal scrolling possible with deep trees.)

Remote data readily visible, authentication modal as needed.

User can add files to 'orbits,' regardless of file's location.

◀ ▶ | ⊞ ☰ ⊟ | ▽ | ✖ | ⓘ | 🔍 Search

<u>Local</u>
📁 User
　└ 📁 Documents
　　└ 📁 Data

<u>Remote</u>
aws S3
🔺 Google Drive

<u>Orbits</u>
✖ Alpha Project
✖ Beta Project

🖼️ lorem.png　📄 csv ipsem.csv　📄 </> dolor.json
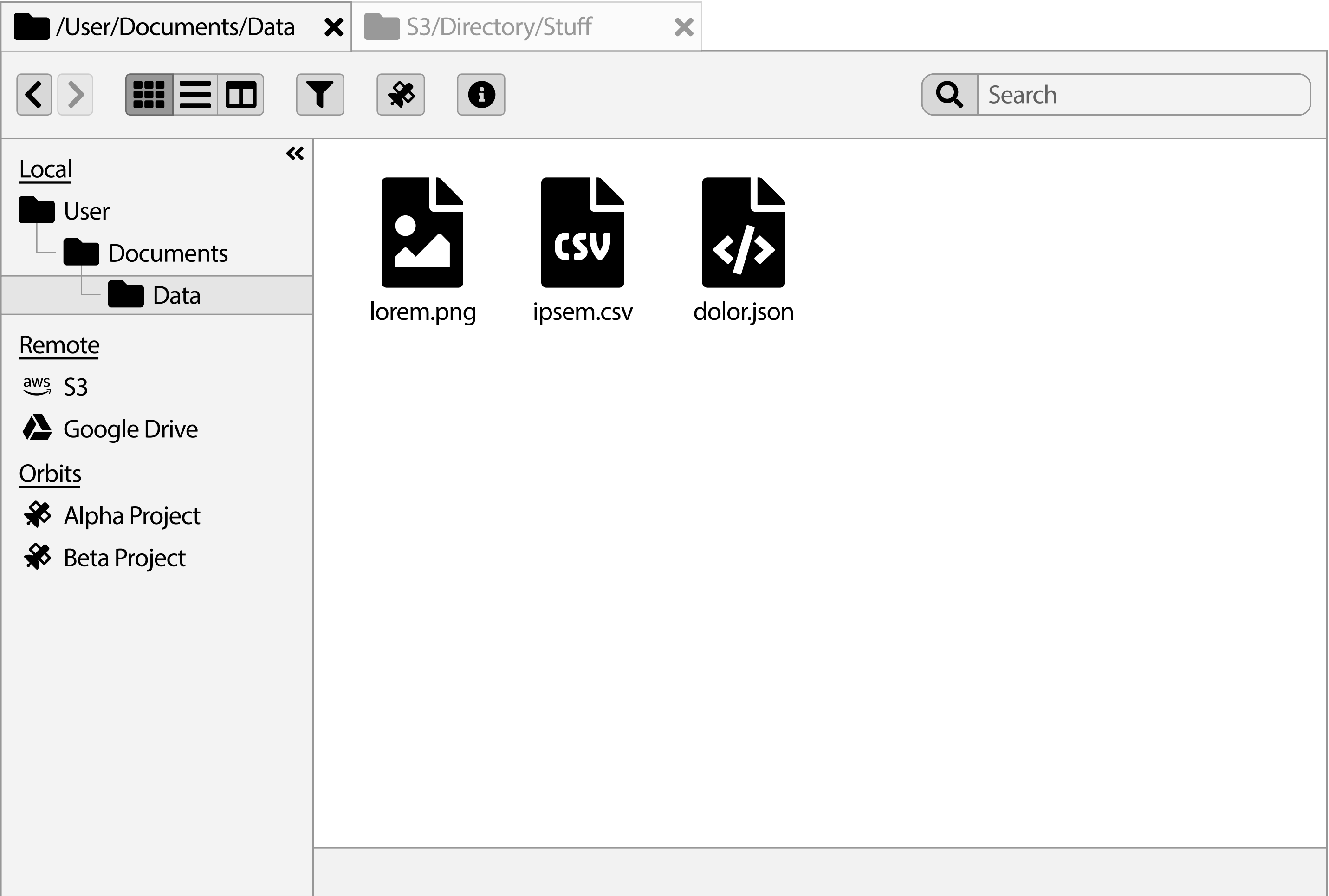
Orbit: Alpha Project ✕   Folder icon is used for all file browsers; tab name used to distinguish between views.

🔍 Search

Local

📁 User

Remote

aws S3

▲ Google Drive

Orbits

✷ Alpha Project
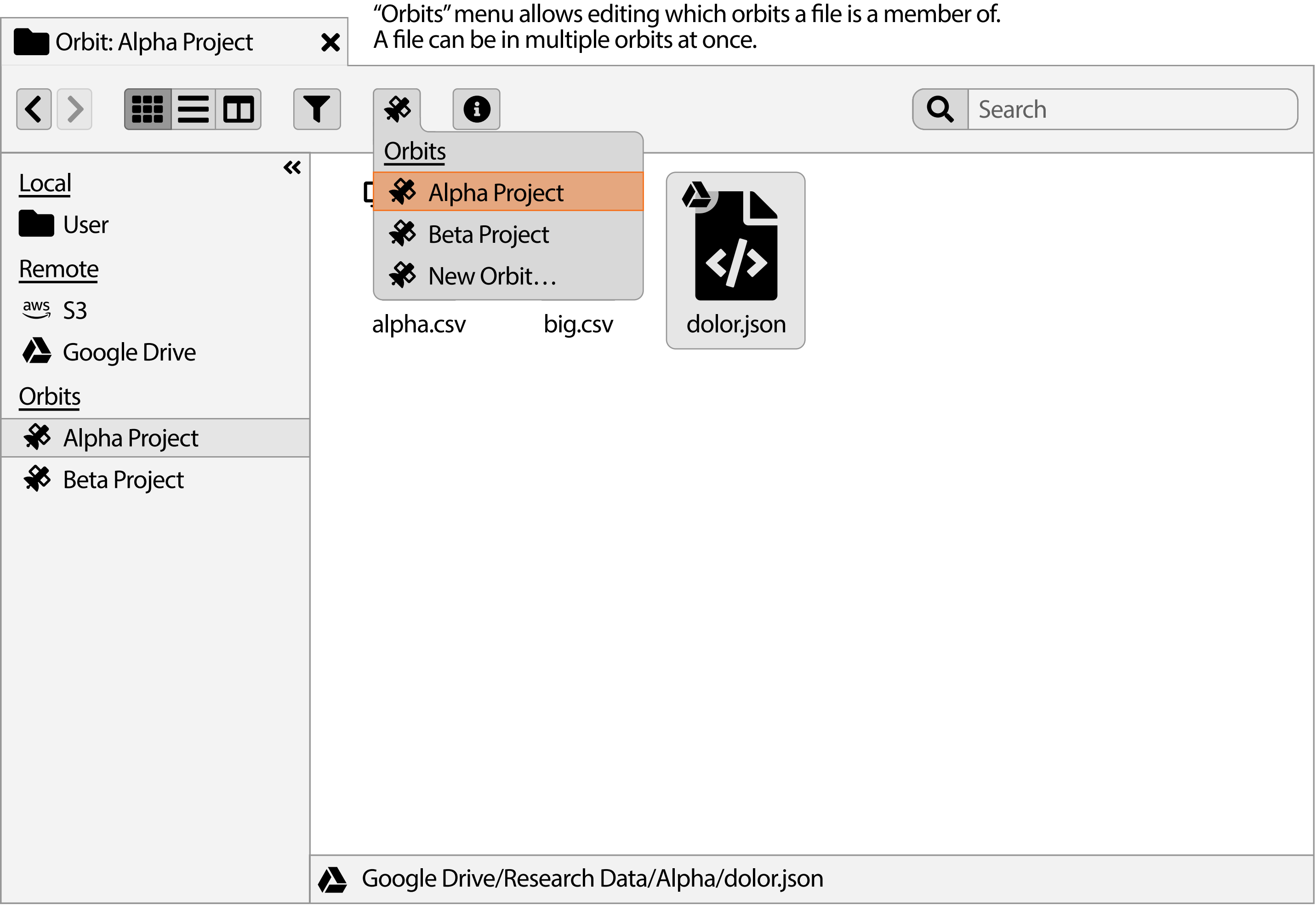
✷ Beta Project

CSV
alpha.csv

CSV
big.csv

</>
dolor.json

Badges indicate where the file is stored.
If you have multiple sources with the same icon,
hovering over the badge expands it to show the
full name.

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"Orbits" menu allows editing which orbits a file is a member of.
A file can be in multiple orbits at once.

Orbit: Alpha Project ✕

Orbits
  ✦ Alpha Project
  ✦ Beta Project
  ✦ New Orbit...

alpha.csv   big.csv   dolor.json

Local
  User
Remote
  S3
  Google Drive
Orbits
  ✦ Alpha Project
  ✦ Beta Project

Search

Google Drive/Research Data/Alpha/dolor.json
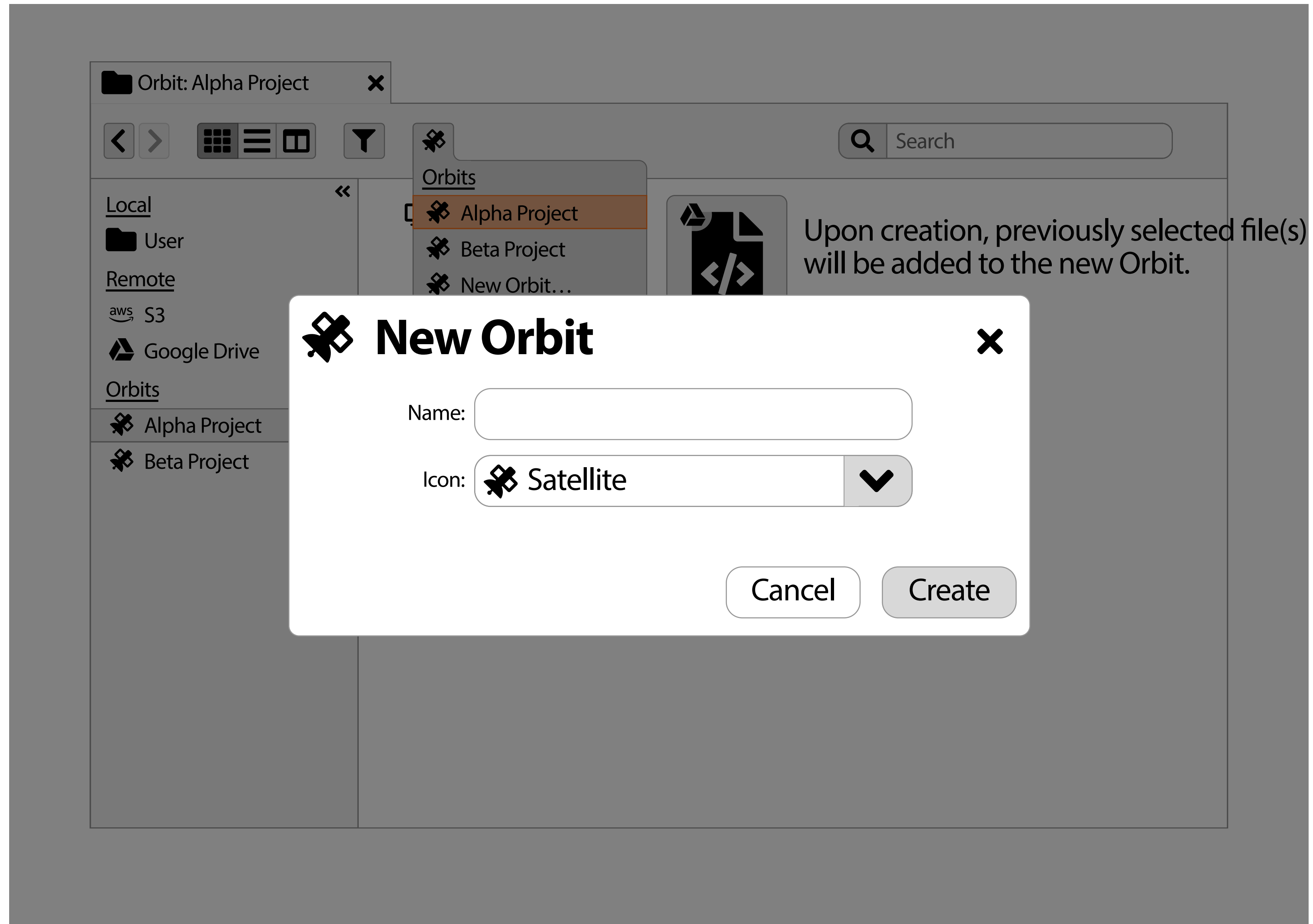
Status bar shows path to selected file, beginning with the full name of the source.

Path segments are clickable, and will jump to that location in the file browser.

Upon creation, previously selected file(s) will be added to the new Orbit.

New Orbit

Name:

Icon: ⚙ Satellite ⌄

Cancel   Create

Search: "dog csv" ✕

Search looks across all connected sources.

◀ ▶ ▦ ☰ ▥ ▼ �֎ ⓘ

🔍 dog csv

Local

📁 User

Remote

aws S3

△ Google Drive

Orbits

✖ Alpha Project

✖ Beta Project

«

🖥 CSV
dogs.csv

aws CSV
pets.csv

△ Google Drive CSV
breeds.csv

Expanded badge (triggered by hover) shows full name of source.

Side-by-Side View

Utilizes Jupyter Lab's existing split screen infrastructure.
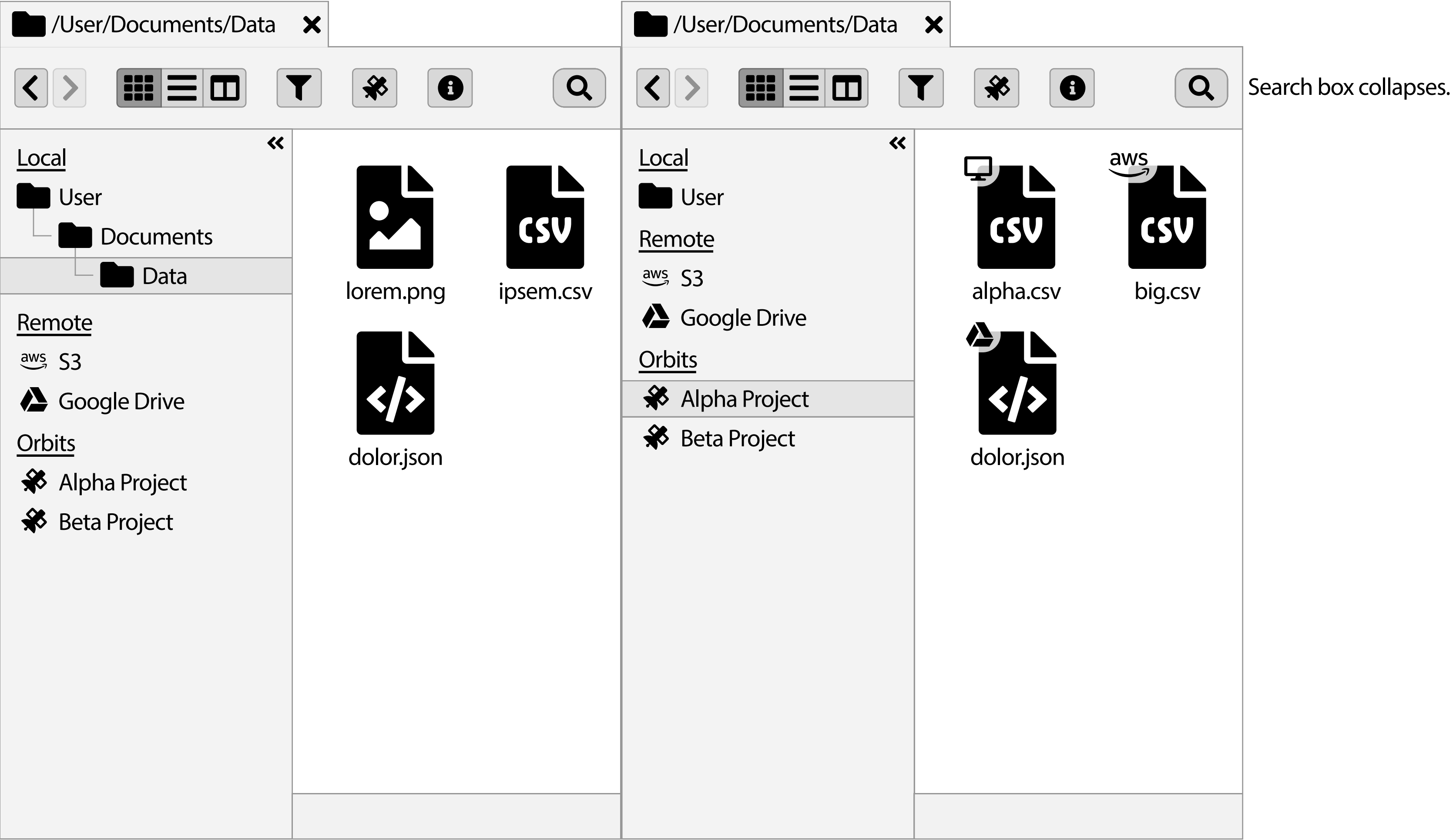
Search box collapses.

Left browser:

/User/Documents/Data ✕

Local
- User
  - Documents
    - Data

Remote
- aws S3
- Google Drive

Orbits
- Alpha Project
- Beta Project

lorem.png ipsem.csv

dolor.json

Right browser:

/User/Documents/Data ✕

Local
- User

Remote
- aws S3
- Google Drive

Orbits
- Alpha Project
- Beta Project

alpha.csv big.csv

dolor.json

When next to another file browser, can drag-and-drop files between them; when next to a notebook, drag-and-drop a file into the notebook to generate a snippet, automatically importing the file from wherever it is stored.

Collapsible Sidebar

Utilizes Jupyter Lab's existing split screen infrastructure.

Sidebar can be collapsed to save space.

Click ›› to reopen sidebar; if horizontal space is too limited, can open as a slide-over.
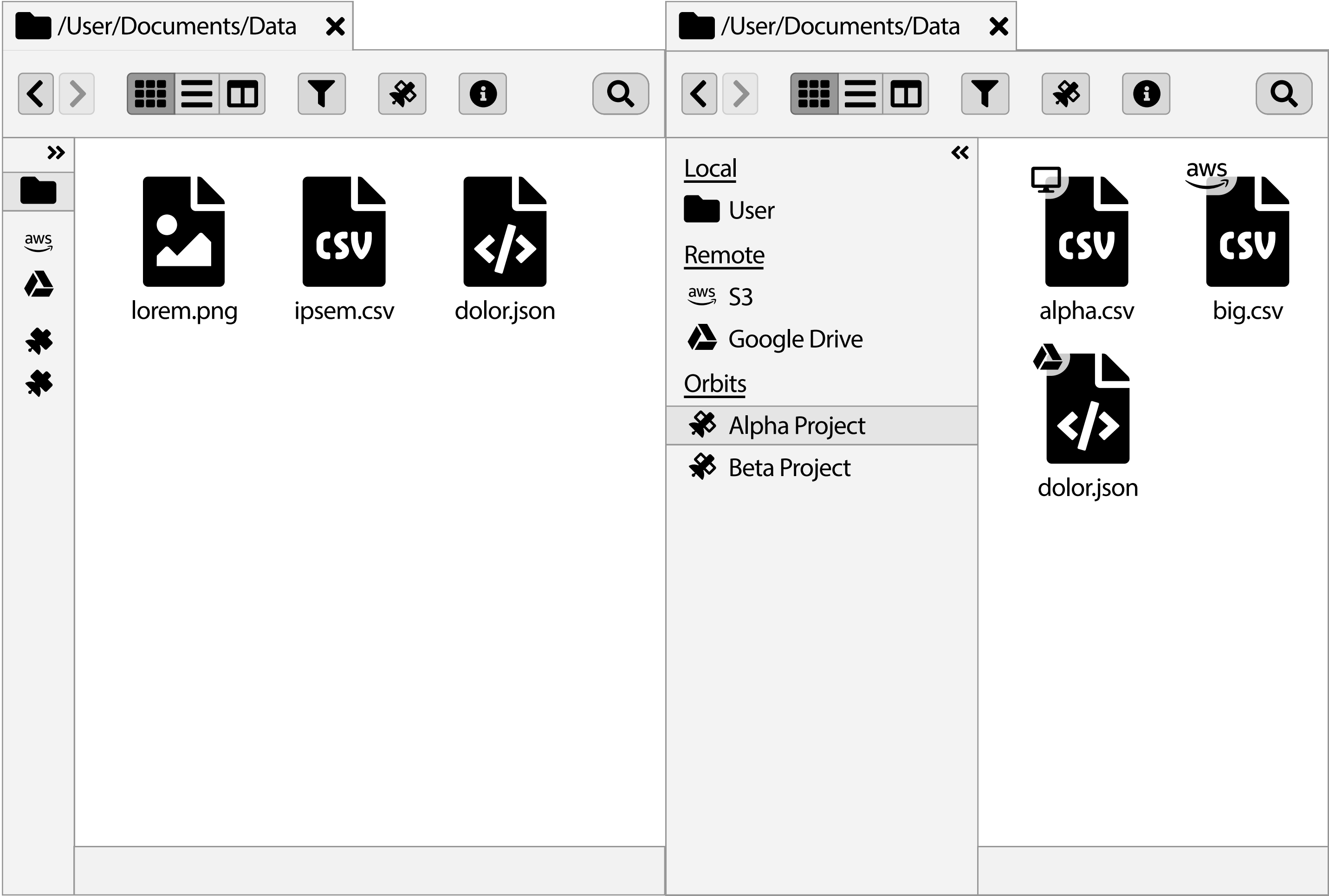

When next to another file browser, can drag-and-drop files between them; when next to a notebook, drag-and-drop a file into the notebook to generate a snippet, automatically importing the file from wherever it is stored.
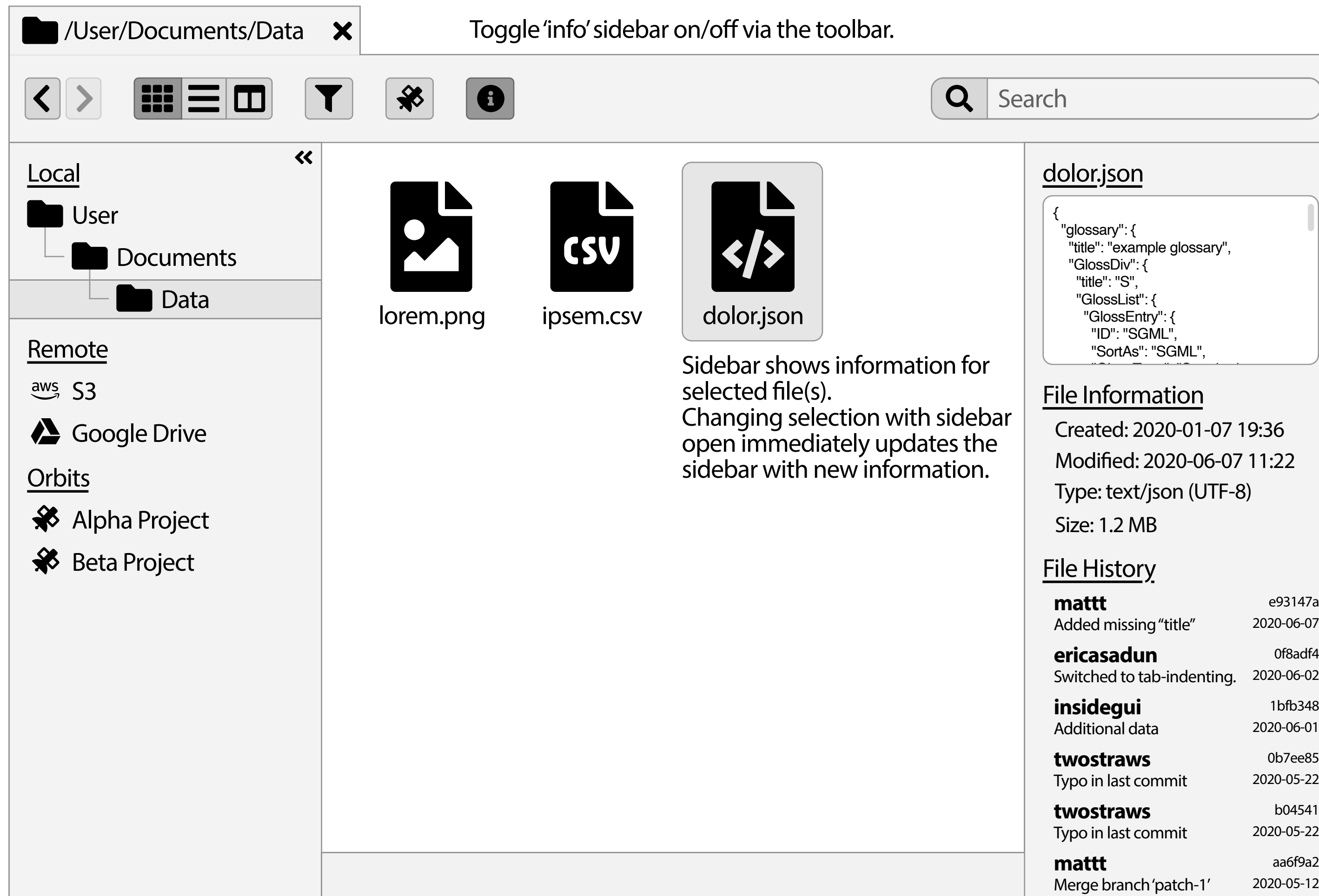
Info Sidebar

📁 /User/Documents/Data ✕

Toggle 'info' sidebar on/off via the toolbar.

Local

📁 User

　📁 Documents

　　📁 Data

Remote

aws S3

▲ Google Drive

Orbits

✦ Alpha Project

✦ Beta Project

lorem.png　　ipsem.csv　　dolor.json

Sidebar shows information for selected file(s).
Changing selection with sidebar open immediately updates the sidebar with new information.

dolor.json

```
{
  "glossary": {
    "title": "example glossary",
    "GlossDiv": {
      "title": "S",
      "GlossList": {
        "GlossEntry": {
          "ID": "SGML",
          "SortAs": "SGML",
```

File Information

Created: 2020-01-07 19:36

Modified: 2020-06-07 11:22

Type: text/json (UTF-8)

Size: 1.2 MB

File History

mattt Added missing "title"	e93147a 2020-06-07
ericasadun Switched to tab-indenting.	0f8adf4 2020-06-02
insidegui Additional data	1bfb348 2020-06-01
twostraws Typo in last commit	0b7ee85 2020-05-22
twostraws Typo in last commit	b04541 2020-05-22
mattt Merge branch 'patch-1'	aa6f9a2 2020-05-12

Small preview of file; scrollable, within limits.

Entire sidebar is scrollable, to support long file histories.

Basic file metadata.

Hover over size to see size-in-bytes.

Full file history (via git/svn/etc.) shown in sidebar.

Click on a commit to open a diff view.

When space permits, opens as a sidebar.
In compact widths, clicking the 'info' button presents this information in a modal, instead.

Concept 2

"Launcher Add-On"

Intermediate - Expert

| Action | | Source | | Control |

Launcher

File Browser

Kernel

Search 🔍 ▽

File Browser ①   ✕   File 1   ✕

Icon **Spaces**

Space 1 ✕
Icon < Local directory path > ⌃
  Folder name
    File 1 ②
      File name
Icon Google Drive   Connected ⌃
  Folder name
    File name
    File name

| Space 1 | Space 2 | + |

Icon **Connections**

Space 2 ③ ✕
Icon < Local directory path > ⌃
  Folder name
    File name
    File name
Icon < Local directory path > ⌄
Icon S3   Connected ⌃
  Folder name
    File name
    File name

| S3 | Google Drive | + |

Icon < Local directory path > ⌃
Icon < Local directory path > ⌃
Icon < Local directory path > ⌄
  Folder name
    File name ④
      File name

Annotations

1. File Browser

User can create spaces and create new connections to third party sources within the File Browser.
The user can drag and drop their created Spaces into the left viewing panel to view and manage files during their workflow process.

2. Left Panel

Users can rearrange their left panel in ways they see fit. They can also drag to change the boxes to change the size of them.

3. Spaces in the left panel

Expand/collapse folders
Connection status displayed

4. Working outside of a Space

Should the user choose to work outside of a Space, the user can open folders from their local or connected sources and are displayed as a separate entity in the left panel.

File   Edit   View   Run   Kernel   Tabs   Settings   Help

| Action | | Source | | Control | |

1

| File Browser ✕ | File 1 ✕ | |

Launcher

File Browser

Kernel

Search   🔍   ▽

| Space 1 | ✕ |
| Icon < Local directory path > | ⌃ |

Folder name

File 1

File 2

| Icon Google Drive | Connected ⌃ |

Folder name

File name

File name

| Space 2 | ✕ |
| Icon < Local directory path > | ⌃ |

Folder name

File name

File name

| Icon < Local directory path > | ⌄ |
| Icon S3 | Connected ⌃ |

Folder name

File name

File name

Icon < Local directory path >	⌃
Icon < Local directory path >	⌃
Icon < Local directory path >	⌄

Folder name

File name

File name

»   File 1

File
Preview

File Meta Data

Revision History

Jana Abumeri	April 23, 2020
Git commit message	< commit hash >
Jana Abumeri	April 23, 2020
Git commit message	< commit hash >
Jana Abumeri	April 23, 2020
Git commit message	< commit hash >
Jana Abumeri	April 23, 2020
Git commit message	< commit hash >
Jana Abumeri	April 23, 2020
Git commit message	< commit hash >

Annotations

1. File content (right panel) - "View" toggle

Users will be able to toggle whether they want to view the file content panel on the right.

Should they toggle the panel from a place like the "View" primary menu item, it will be anchored to the active file in the workspace.

The panel contains a file preview, file meta data, and file revision history.

This panel can be expanded or collapsed.

File   Edit   View   Run   Kernel   Tabs   Settings   Help

| Action | | Source | | Control |

Launcher

File
Browser

Kernel

| File Browser | ✕ | File 1 | ✕ |

Search   🔍   ▽

Space 1   ✕
Icon < Local directory path >   ⌃
    Folder name
        File 1
        File 2   ①
Icon Google Drive   Connected   ⌃
    Folder name
        File name
        File name

Space 2   ✕
Icon < Local directory path >   ⌃
    Folder name
        File name
        File name
Icon < Local directory path >   ⌄
Icon S3   Connected   ⌃
    Folder name
        File name
        File name

Icon < Local directory path >   ⌃
Icon < Local directory path >   ⌃
Icon < Local directory path >   ⌄
    Folder name
        File name
        File name

»   File 2

File
Preview

File Meta Data

Revision History

Jana Abumeri   April 23, 2020
Git commit message   < commit hash >
Jana Abumeri   April 23, 2020
Git commit message   < commit hash >
Jana Abumeri   April 23, 2020
Git commit message   < commit hash >
Jana Abumeri   April 23, 2020
Git commit message   < commit hash >
Jana Abumeri   April 23, 2020
Git commit message   < commit hash >

Annotations

1. File content (right panel) - R Click toggle

The panel can also be anchored to a
file selected-in the left panel. The user
would right click the file and toggle
the panel to be shown ("View Right
Panel").

Even though "File 1" is
currently active in the workspace,
the user has opted to view the
content of "File 2" in the right panel.

Local

Remote control

Api

Action

Action

Action | Source | Control

(1)

Import File

Export

Preview

Action

Action

Permissions

Action

Action

Action

Action

Direct

File name

Google Drive — Connected ∧

Folder name

File name

File name

Create a New Space

Space Name

(3)

Add a file path — Browse

Select an existing connection ⌄

Space

— <Local file path>

— <Local file path>

— Google Drive connection

— S3 Bucket

Cancel — Create

Connect to a new source — **(4)**

Connection name

Connect to ⌄

Cancel — Create

Space 2 — ✕

(2)

View Space

Edit Space

Delete Space

Export

Action

> ∧

> ∨

Connected ∧

File name

File name

Icon < Local directory path > ∧

Icon < Local directory path > ∧

Icon < Local directory path > ∨

Folder name

File name

File name

Annotations

1. Popups

Popup appears when clicking buttons to perform certain actions relating to file management, sourcing, and control.

2. Right clicks

Right click Space to edit it

3. Create a new Space

A modal appears when a user selects to create a new Space through the File Browser.

The modal controls the screen when it appears and the user must either create a space or cancel their action.

4. Connect to a third party source

A modal appears when a user selects to create a new Connection through the File Browser.

The modal controls the screen when it appears and the user must either connect to a new source or cancel their action.